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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,577	01/24/2002	Naohiro Hirose	KON-1707	5337

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EXAMINER	
RODEE, CHRISTOPHER D	
ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,577	HIROSE ET AL.	
	Examiner	Art Unit	
	Christopher RoDee	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) *2-5* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 6-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9 August 2006 has been entered.

Election/Restrictions

Claims 2-5 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected processes, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 28 August 2003. The basis for the restrictions presented in the Office action of 29 January 2003 remains applicable to the claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 6-8, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nozawa *et al.* in US Patent 6,555,281 in view of Rimai *et al.* in US Patent 4,737,433.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nozawa *et al.* in US Patent 6,555,281 281 in view of 281 in view of Rimai *et al.* in US Patent 4,737,433 and further in view of Yachi *et al.* in US Patent 5,773,185.

The rejections were presented in the Office action of 22 December 2005 and discussed again in the Final Office action of 3 May 2006 and the Advisory Action mailed 3 August 2006. Applicants traverse the rejections based on the executed Rule 132 declaration filed 9 August 2006. The declaration produces a toner according to Nozawa (i.e., "Nozawa 2") and a toner having the same D4, SF-1 and SF-2 values, nearly the same N value, but different amounts of particles between 0.60 and 1.00 μm (¶ 6). The respective toners were tested in the manner disclosed on specification pages 46-49. Fog density and half tone unevenness were tested (¶ 9). In the recent response applicants clarify that the evaluation designators for the toners (i.e., "A", "B", and "D") are as specified at the top of page 49.

The Examiner has carefully considered the evidence in the declaration in light of applicant's remarks and has reviewed the applied art. Rimai teaches, "Various techniques have been suggested to improve the copy quality of the electrostatographic images including that taught and claimed in the above-mentioned patent which accomplishes this to a certain extent by rigidly controlling the size of the toner particles by a classification technique" (col. 1, l. 44-49). Rimai also states, "Thus, in dry development systems, the resolution of the final image is limited by the particle size of the toner employed and the lower limit of particle size is limited by the forces present on the particles which control whether or not a transfer will occur efficiently. The efficiency drops off as the particle size decreases and more toner remains behind on the photoreceptor" (col. 1, l. 61-67). A further discussion in the Background of the Invention says, "In order to obtain maximum image clarity of transferred images (as quantified by granularity measurement or other parameters which relate to image resolution), it is important to maintain as low a mean particle size for toners as possible. If the transferred toner particles are too large, fine detail in an image cannot be satisfactorily resolved. The granularity of the completed image tends to increase with the toner size. However, it is found that fundamental difficulties arise

when trying to transfer toner particles having an average radius less than 5 μm" (col. 2, l. 7-19). Rimai addresses the problem of toner transfer for particle small than 5 μm (which are included within the scope of the claims) by controlling the particle size distribution as well as the receiver characteristics (col. 4, l. 48-61). Nozawa is concerned with toners having a size of 4 to 8 μm (col. 11, l. 10-13). Toners with sizes of from 4 to 5 μm are particularly relevant to the teachings of the combined references.

As seen from the discussion above and the remainder of Rimai's teachings, the size of the toner particles is directly related to the resolution of the final image. The art recognizes a problem in trying to transfer toner particles having an average radius of less than 5 μm. Rimai overcomes this transfer problem by controlling the particle size distribution of the toner. As the artisan would recognize if the toner of less than 5 μm size is not transferring properly the artisan would expect a decrease in image resolution, including uneven lines. The artisan would also expect increased toner fog with smaller toner particle than those of the desired average because "the forces present on the particles ... control whether or not a transfer will occur efficiently. The efficiency drops off as the particle size decreases and more toner remains behind on the photoreceptor." This remnant toner on the photoreceptor would cause fog as the untransferred toner builds up on the photoreceptor and is later deposited on the image receiving media (e.g., paper) As noted in the Advisory Action, "the [declaration] results would appear to be what would have been expected by the skilled artisan because the small particles (e.g., 0.60 to 1.00 pm) would have low charge levels. This would reduce the image density and consequently increase fog density. Further as development progressed, the amount of toner particles at the desired sizes would decrease and the number of small particles would increase."

The evidence does not show an unexpected result. Rather, the results are what would have been expected by the skilled artisan. The rejection is maintained.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cdr
11 September 2006

CHRISTOPHER RODEE
PRIMARY EXAMINER